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Effects of Value Added Tax Zero-Rated Food Products on Households' Welfare in South Africa

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ABSTRACT

Internationally, the use of Value Added Tax zero-rating to lessen the tax's regressivity is now widely acknowledged. From an economic point of view, it is still debatable if zero-rating is the most economical method of helping the poor. The 2018 1% VAT rate increase in the South African tax system has renewed focus on the need of zero-rating from the viewpoints of equality and poverty. This paper evaluated whether the existing list of commodity items with zero ratings improves welfare and whether or not more items should be taken into consideration for potential zero-rating. The Southern Africa Labour and Development Research Unit's National Income Dynamics Survey (2018) of South Africa was used in this study. The survey offered pertinent data on family spending on specific items by total spending and income level. The study's conclusions showed that a fair and just tax system required the VAT zero-rating of particular items as a logical and essential step. Most of the items with a zero rating are used by low-income households. However, there are a few exceptions to the rule for fruits and some vegetables. Also, the study commends individually quick-frozen (IQF) chicken portions for zero-rating.

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Introduction

South Africa first implemented Value Added Tax in 1991 to replace the General Sales Tax. It is an ancillary tax that is collected at various production stages based on the value added to the product, and the method of distribution that when it is implemented nationally, is normally intended to tax final consumption (Go ,Kearney ,Robinson & Thierfelder, 2005; Le Minh, 2007; Roos et al., 2020). Such a tax imposes a comparatively greater cost on the poor than on the wealthy because the former typically spend a larger percentage of their income on consumer goods (i.e., it is a regressive tax). In response, a few items have been zero rated, meaning that a zero VAT rate is applicable to a selection of essential items. This enhances tax equality and lessens the tax burden on low-income consumers. A few more products have been included on the zero-rated list over the years (Jansen & Calitz, 2017). The National-Treasury (2018) indicated a total of 19 basic foodstuffs, including, rice, samp, maize meal, mealie rice, brown bread, lentils, dried beans, dried mealies, pilchards/sardines in cans, cultured milk, milk, blend of dairy powder, milk powder, eggs, brown wheaten meal, vegetables, fruit, vegetable oil and consumable legumes and thumps of legume-bearing plants, that are exempt from taxation under the current VAT system.

However, in February 2018, the South African government proposed to increase VAT by 1%, effective from 1 April 2018 to generate additional revenue. There was a R50 billion tax income gap for the state because of the sluggish economy, which calls for immediate action. It was estimated that in 2018–19, measures to raise income tax and value-added tax earnings would yield R36 billion; a 1% increase in VAT was predicted to contribute the most, at R22.9 billion. Therefore, VAT remains a considerable source of income for the government. Nonetheless, it is crucial to take into account how this may negatively impact the welfare of ordinary individuals (National-Treasury, 2018). It is vital to know that this increase also came at a time when there was a slow growth in private and public incomes, because of the 2018 technical recession among other things (Industrial-Development-Corporation, 2019). Even while VAT appears to be functioning satisfactorily overall, there are still some problems that need to be considered. An evaluation of the VAT structure is necessary given that the fundamental VAT system has been restructured for the second time after it has existed for over twenty years. This paper focused on the assessment of the South African VAT zero rating following the recent VAT rate increase. It examined if whether the existing list of zero-rated commodities enhances welfare and whether more (or other) items ought to be taken into consideration.

Literature Review

The goal of zero rating is to provide everyone, especially the impoverished, better access to the necessities of daily life, including food and services. However, indirect taxes such as VAT are generally seen as regressive (Ebrill ,Keen & Perry, 2001). A regressive tax takes a large share of income from the impoverished as compared to wealthy families (Ganghof, 2006). Generally, low-income earners in developing countries spend most of their income on consumption especially necessities compared to high-income earners. Agreeing to (Kearney, 2005), because of this, low-income earners also spend the majority of their income on indirect taxes. The National-Treasury (2018) indicated that in South Africa, the regressive problem is reduced by exempting goods and services and zero rating numerous food items and petroleum products. The VAT rate is reduced on these products because they are consumed by low-income populations (e.g., food products).

Unfortunately, these solutions fall short of fully addressing the problem. Odhiambo and Odada (2010) revealed that it is expected that wealthy households will gain more from a zero rating than impoverished households. Their results indicated that the zero rates of VAT failed to effectively target the products that the impoverished buy and consume in greater amounts from official marketplaces. The National-Treasury (2018) support this assertion. Their results revealed that zero rating decreases income of high-income households. In

terms of money, the rich benefit more than the underprivileged, as they amount for a greater share of overall spending. Even if they spent more on zero-rated commodities, in 2014, the 10% of families with the lowest incomes spent R830 billion, while the 10% with the highest incomes spent R1.3 billion (National-Treasury, 2018). In addition, Viard and Carroll (2012) stated that these solutions provide a limited regressively, living a politically unacceptable share of the fiscal burden on the middle class. They further revealed that taxing different goods at different rates builds complexity and economic efficiency and provides a limited offset of regressively.

When compared to income, a uniform VAT rate is proportionate and so regressive. For the same basket of items, higher-income earners pay less VAT than lower-income earners. In 2001, a regressive measure was concluded. The outcomes of the study revealed that South African households with lower incomes had to pay up to 3.5% of their income in VAT, whereas households with higher incomes only had to pay 2.5%. Moreover, when the tax was first introduced in 1991 at a 10% rate there was a shift in VAT to consumers, as well as when it was first increased from 10% to 14% in 1993 (Go et al., 2005). Even though commodity prices are usually affected by various factors, these findings serve further as evidence that the recent Value Added Tax increase caused a rise in commodity prices, even though the level of the increase does not certainly deliberate to the same size in prices. The degree to which prices increase depends on sellers' capacity to transfer the cost of the tax to customers, and it is resolute by the elasticity of supply and demand. Additionally, the fact that now the cost of living has increased over the years with relatively low-income raises and high unemployment rates, the tax might be more regressive following the current tax raise.

Nonetheless, the results of public policies on the distribution of income are evaluated by the view of progressivity. Albayrak (2017), refers to progressivity as "the measure of the deviation of a tax or benefit system from proportionally in favour of the poorer". In the same way, any progressive policy tool is supposed to expand the distribution of welfare in society, so it is anticipated to have positive distributive impacts. Doerrenberg and Peichl (2013) defined progressive tax as one that takes a large share of earnings from well-paid families compared to low-income earners. The VAT deprived of any exemptions and zero rating is regressive. The VAT exemptions and zero-rating of products and services are two methods for making VAT progressive (less regressive). Furthermore, the adoption of zero rating has turned out to be broadly acknowledged globally to alleviate the regressively of VAT. However, it is debatable from an economic perspective if targeting the impoverished with a zero rating is the most profitable strategy (Ebrahim ,Gcabo ,Khumalo & Pirttilä, 2019).

Jansen and Calitz (2017) addressed some of South Africa's VAT zero rating concerns. They initially inquire as to whether a zero rating ought to be considered in light of the tax theory literature before calculating the effects of poverty and the potential impact on tax collection should a zero rating be eliminated. They contrast the estimated national expenditures with the costs and advantages of a zero rating. Their findings show that targeting the poor with zero rating VAT is not a cost-effective strategy. The personal income serves as an example of a progressive tax because it promotes progressivity in ways that the VAT does not. The comparative tax burden rises with income and so mostly affects the wealthy (National-Treasury, 2018). High-income earners pay more to the tax as compared to low-income earners. Even so, the country's complete tax system is progressive. The progressive nature of the tax system considers both direct household taxes and the value-added tax (VAT). It does not concentrate on the VAT's distributional effects alone, as the overall tax system is what ultimately impacts poverty and equity (Go et al., 2005).

Into the bargain, the nation is still one of the greatest unequals in the world, and its population continues to live in poverty. The recent study on poverty and inequality by Francis and Webster (2019), indicates that in the country poverty has been rising from 2011, after almost two decades of steady decline. Poverty has increased from low 53.2% in 2011 to 55.4% in 2015, 30.4 million people were living in poverty. Approximately half of the population of the country is persistently underprivileged at the upper-bound national poverty line of R 574 per person per month (April 2018 prices). This group of households is considered very poor (Industrial-

Development-Corporation, 2019; Statistics-South-Africa, 2018). This has increased drastically over the years, as it stands more than half of the nation's population is extremely poor (World-Health-Organisation, 2023).

Conversely, Terblanche (2002) significant input to the field of inequality in the country highlights that the existing state of income and wealth has ancient origins that extend back several centuries. According to Francis and Webster (2019), overall inequality in South Africa decreased somewhat between 1993 and 2014, from 0.681 to 0.655, except a brief uptick that coincided with the global financial crisis, which saw inequality climb to 0.68 in 2008. "The Gini coefficient estimates the level of income inequality in a population. "It changes from 0 (perfect equality) to 1 (perfect inequality) and a coefficient of on speaks to an individual getting all the pay" (Matsaganis & Leventi, 2013; Ramudzuli, 2019). Finn (2015) determined that 2015 Gini Coefficient of income was 0.66. This suggests that South Africa's total level of inequality has not decreased significantly over time. Wage inequality is the primary cause of the extreme levels of income inequality. As demonstrated, 0.6 of the 0.66 income Gini Coefficient is attributed to wage inequality, or 91% of the total income inequality. Furthermore, at 0.66, the nation's Gini Coefficient of income in the early 1990s was the highest among the fifty-seven states for which information was available at that time (Francis & Webster, 2019).

Furthermore, the unemployment rate remains extremely high. According to World-Bank-Group (2018), in the third quarter of 2017, 27.7% of people were unemployed, indicating that the economy is not producing enough jobs. Even if the unemployment rate decreased somewhat to 27.6% by the end of the first quarter of 2019, by the end of the second quarter of 2019, the rate had risen by 1.6% to 29.0% (Statistics-South-Africa, 2019). Employers seek experienced personnel, therefore youth and inexperienced personnel face the effect of the issue; youth unemployment rates rose from 21.4% to 22.9% between 2011 and 2015 (World-Bank-Group, 2018). At the end of the fourth quarter of 2022 the youth unemployment rate was 39.9% for those between the ages of 25 and 34 and 61% for those between the ages of 15 and 24 (Industrial-Development-Corporation, 2023). In the first quarter of 2023, the official unemployment rate was 32.9% overall (Statistics-South-Africa, 2023).

In addition, governments are concerned about increasing income inequality because of its adverse effects on income distribution, poverty level, and institutional and social instability, which in turn hinder growth in the economy and may lead to political instability. Over time, taxes have been utilized because they continue to be the primary tool in fiscal policy to reduce income inequality by redistributing tax revenue to fund public goods and offset market-based inequality (Chan, 2018). However, Richupan (1984) argues tax evasion and fiscal calculations that obstruct the distribution process render the redistributive function of taxes in underdeveloped countries inefficient. Because of this, a sizable amount of taxes goes unpaid, making the Value Added Tax system the best most effective means for developing nations to raise sufficient public revenue. However, the regressive character of VAT makes its application to reduce inequality debatable.

Chan (2018) stated that both established and developing economies see an increase in overall revenue from VAT. To reduce inequality in the nation, VAT enables the government to create enough money to finance growth through increased investments in national security, welfare, public infrastructure, education, and health care. According to Zhou ,Chen ,Yang and Khoshnevis (2011), implementing the Value Added Tax system narrowed the gap between rural and urban income in China. This is sustained by Avi-Yonah (2014) on the use of Value Added Tax to finance social programs to lessen income inequality in America. However, Value Added Tax negatively affects the distribution of income because poverty-stricken households dedicate more of their earnings on consumption relative to wealthier households. Chan (2018) supports this statement. Nonetheless, in the study that was carried out in Chile by Poblete (2010), the results specified that poverty and income distribution improved because of VAT and income tax rose after the VAT rate was reduced. Similarly, poverty and income inequality can be reduced by expanding the range of products that have a zero rating and are exempt, such as food, education, and health (Mussa, 2014).

Data and research methodology

The paper used data from the National Income Dynamics Survey Wave 5 (2018) released by the Southern Africa Labour and Development Research Unit. The paper employed the study method used for analysing zero rating by Jansen and Calitz (2017) and National-Treasury (2018). What makes this study exceptional from its predecessors is that firstly, Jansen and Calitz (2017), analysed zero-rating before the VAT rate increase and the National-Treasury (2018), only provided a list of commodities that should receive a zero-rating, and the study used the 2014/15 Living Condition Survey (LCS), whereby unlike the National treasury's study this study examined the specific objective of zero-rating (if it enhances welfare), as well as providing recommendations, and the study used the most recent expenditure household survey, the National Income Dynamics Survey (NIDS) wave 5 of 2018

Zero-rating only applies to a certain number of foodstuffs in the country, and the challenge that was faced while addressing this objective was that specifically in the food category some of the respondents recorded the total amount of money spent on all commodity items (food items), while others recorded consumption expenditures on each commodity item (but some of them did not know the amount of money spent on these items) which is the basis of this objective (zero-rated foodstuff). Because the aim is to assess consumption of the poor in terms of the amount of money spent to specific commodity items. Those who did not report the amount of money spent on these items were removed. For that reason, the figures provided below may be higher.

The main concern here was whether the poor consumed more or less of specific commodity items. Thus, the study calculated the proportional household expenditure on individual commodity items recorded on National Income Dynamics Survey to make certain that only the goods that amount for a substantial share of spending are included, necessitating that a product has to constitute at smallest amount 0.2% of the aggregate family spending. Certain items of spending have been eliminated, such as commodities that are exempt from VAT at the moment. In a similar vein, NIDS combined some of its expenditure data into one category. For example, rather than listing the zero-rated expense for bread, the data included the expenditures for bread and flowers. On the other hand, flour has a 15% tax. As a result, such information was eliminated, and only 10 of the 19 currently in use zero-rated commodities products were examined. These include, maize meal, rice, samp, cooking (vegetable) oil, eggs, tinned fish, potatoes and other vegetables, fruits, dried beans and lentils. Analyzing the spending habits of households across the income spectrum was the first step in the process. Based on their per capita household expenditure, households were rated from poorest to richest and then divided into equal sizes, or ten deciles. To rank households, expenditure was utilized instead of income because income is typically reported less precisely in surveys like the National Income Dynamics Survey. Since the analysis here focuses on spending patterns, it may become unclear if income is prioritized before spending is examined.

The equity-gain ratio was computed by dividing the poor's proportionate spending by the non-poor's proportionate spending. This ratio indicates how disproportionately rich the underprivileged consume. In this study, families in deciles 1-4 and deciles 9–10 were compared. For instance, households in the lowest four deciles have proportionate expenditure that is five times higher than that of the 9–10 percentile if the equity-gain ratio is greater than 5. The items that the impoverished consume in excess can be found using this criterion. To further evaluate the impact of zero-rating in the form of reduction to the poor against the cost of zero-rating, defined as VAT revenue forgone to the non-poor.

Two alternative definitions of the poor are presented, and determine the benefit-cost ratio (BCR) as follows:

i. BCR 1: Value Added Tax savings to the families in the first 4 deciles, divided by Value Added Tax income forgone to families between deciles 5 and10.
ii. BCR 2: Value Added Tax savings to families in the first 7 deciles, divided by Value Added Tax income forgone to families amongst deciles 8 to 10

Commodities that are recommended for zero rating, where spending information includes Value Added Tax paid, and zero-rated commodities, where the National Income Dynamics Survey figure does not include VAT, are calculated differently in terms of the VAT income lost. In each of these situations, the following techniques were applied.

i. The expenditure on every item in the current zero-rated commodities basket was multiplied by the previous (14%), as well as the new (15%) VAT rates. This provides the VAT savings at both rates and enables the research to ascertain higher VAT savings on the items that are currently zero-rated. Assumed in the study is 100% consumer pass-through of VAT.
ii. The amount of VAT paid on now vatable commodity products is determined by multiplying the total expenditure by the 14% previous VAT. We subtract the total expenditure paid at 14%, as determined above, from the VAT paid at 15% (to obtain expenditure paid before the VAT increase). The VAT paid at the new rate is then calculated by multiplying the expenditure before the VAT rise by 15%. The research ignores behavioural responses to VAT-encouraged pricing fluctuations and bases its calculations on the assumption that expenditure stays constant. These computations show the VAT paid on currently vatable commodity items as well as the VAT forgone

The study evaluates an item for a potential zero rating based on the BCR1 criterion if the benefit to the underprivileged is not greater than twice the gain to the wealthy. Commodity zero rating must have a progressive effect, meaning that the Value Added Tax savings for a given spending item must represent a larger portion of the impoverished population's income than the wealthy. The progressive impact can be ascertained by computing the average tax rate, which is the Value Added Tax paid on an expenditure item as a percentage of income, and applying the Value Added Tax paid throughout the spending distribution as a proxy for the Value Added Tax savings if a product is zero-rated. Zero rating and the resulting Value Added Tax relief will have a progressive effect in case there is a negative difference between the average tax rates paid by the impoverished and the wealthy, and vice versa

Results

In Figure 1, the average household expenditure and income are presented by decile, whereas in Figure 2, the household income expenditure is shown across key expenditure groups. The proportionate expenditure rises across the deciles for three groups (transportation; housing utilities; education), as shown in Figure 2. This means that a larger portion of the higher expenditure deciles' budget goes toward these goods and services, while the poor spend a larger portion on non-alcoholic drinks and food, and a smaller amount on apparel and footwear.

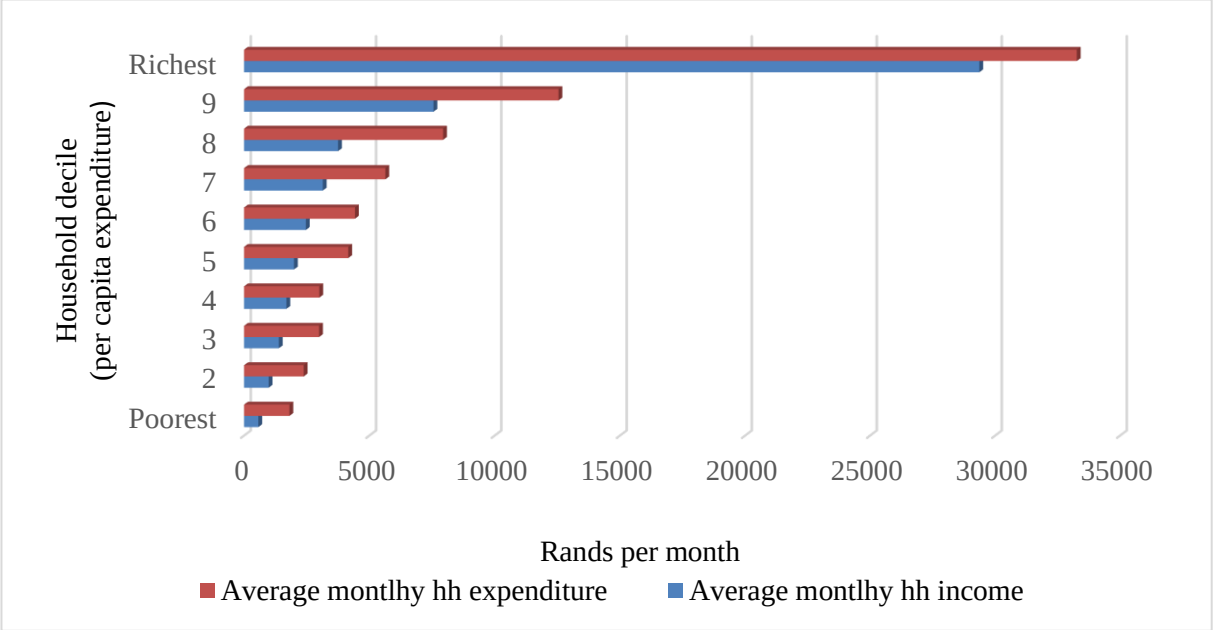

Figure 1. Average monthly household income and average consumption spending by decile, 2017 prices

Source: authors own calculations from National Income Dynamics Survey Wave 5 (2018)

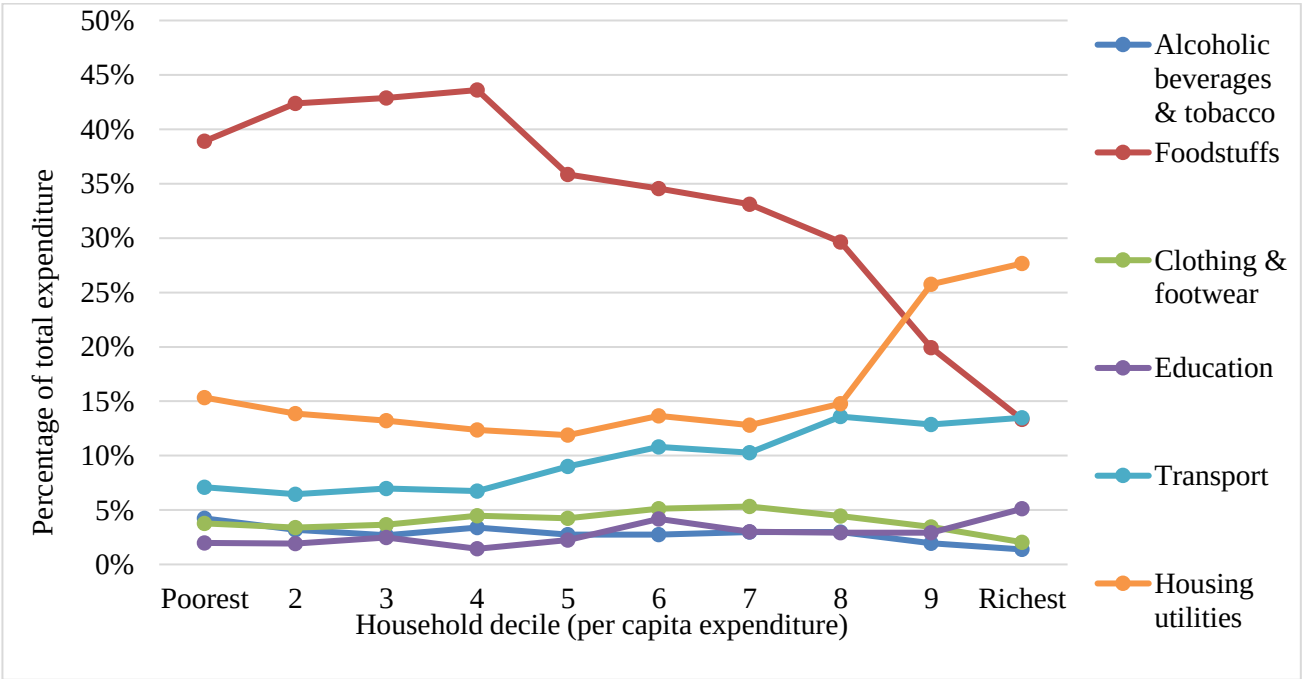

Figure 2. Household spending on major expenditure group items as percentage of overall spending, by decile

Source: Authors calculations from National Income Dynamics Survey Wave 5 (2018)

Applying the criteria defined above, the study identified and observed commodity items that are currently zero-rated, and VAT paid item for consideration. The study used unadjusted figures (2017 prices), consequently, the actual costs may be higher than shown here. As shown on Table 1, items such as dried beans and lentils; eggs; tinned fish; potatoes; other vegetables and fruits have a progressive impact (absorbs a significant portion of wealthy households' income), while cooking oil; maize meal; rice and samp have a regressive impact (takes a large share of income from the poor households). Zero-rating was meant to reduce the regressive impact on food products, because they are consumed more by the low-income population. However, the solution falls short of fully addressing the problem of some commodity items (cooking oil, maize meal, rice and samp). Furthermore, zero-rating reduces the income of high-income households. The National-Treasury (2018) supports this assertion on their study on "Recommendations on Zero-ratings in the Value Added Tax System". They indicated that in terms of money the rich benefit more than the impoverished, since they represent a bigger portion of overall spending.

Table 1. Data summary for ten identified commodity items (Rand thousand), 2017 prices

Zero-rated items	Progressivity index	Benefit Cost Ratio (BCR): 1	Equity Gain Ratio	Average proportional spending (decile 1-4)
Maize meal	181.93	1.28	4.09	0.42
Samp	133.54	1.06	3.12	0.94
Dried beans and lentils	-27.8	1.61	2.09	0.03
Cooking oil	22.03	1.41	2.34	0.12
Eggs	-10.86	1.54	1.98	0.11
Tinned fish	-43.88	1.74	1.74	0.09
Potatoes	-36.11	1.70	1.79	0.89
Other vegetables	-264.16	2.5	0.89	0.89
Fruits	-223.875	4.65	0.42	0.03
Rice	130.225	1.18	3.69	0.2
Criteria	Progressivity index (difference in average tax rates between the poor and non-poor (divided by the difference in average income of two groups) is negative. VAT relief will be progressive	Gain to decile 5-10 is not more than twice the gain to decile 1-4.	Average proportional spending of the poor (decile 1-4) is 5 times than that of the non-poor (decile 9-10)	Average proportional spending is greater than 0.20%

Figure 3 shows that among the present zero-rated commodity products, there are significant differences in the equity gain ratio between the expenditure by the two richest deciles and the expenditure by the four poorest deciles. Commodity items such as maize meal and rice offer a lager gain to the poor households, whereas fruits and other vegetables offer a smaller portion.

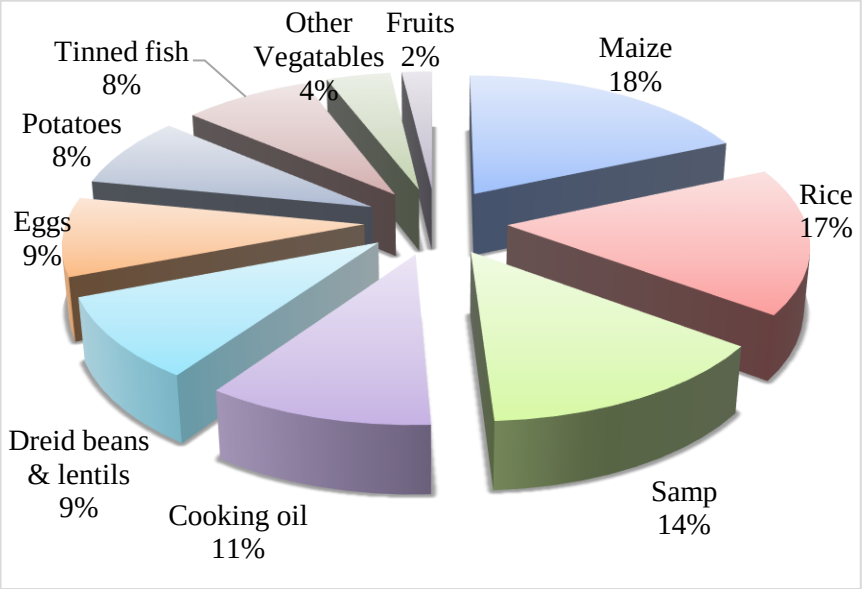

Figure 3. Equity gain ratio for products that are currently receiving zero rate

Source: Authors computations from NIDS 2018 data

Table 2 shows that commodity products such as maize meal, samp, rice, cooking oil, dried beans and lentils, eggs, potatoes and tinned fish offer a larger benefit to the poorest households, whereas the non-poor save further from vegetables and fruits zero-rating. In the opinion of Skinner (2016), fruits zero-rating is no longer appropriate in order to attain vertical equity in South Africa. He argued that the greater difference between consumption of fruits by the poor households and the rich households is so significant that although fruits with a zero rating do benefit the impoverished to a smaller amount, the gain for the wealthy is so uneven that it cannot be considered fair. On the other hand, Jansen ,Stoltz and Yu (2012) utilized the vegetable category to show how South Africa's zero-rated basic foodstuff under VAT may be improved. They specified that it is possible to divide specific fresh vegetables that are presently zero-rated into sub-group of "basic' against "other", as well as the expenditure patterns on basic group are individually dissimilar amongst the rich and poor. They also believed that this might pave the way for a policy recommendation to maintain the zero-rating for only the most basic fresh vegetables and impose the usual VAT rate on other fresh vegetables.

Table 2. Benefit-cost ratio for currently zero-rated commodities with a 15% value-added tax

Expenditure items	BRC 1 Decile 1-4	BRC 2 Decile 1-7
Maize	0.80	4.52
Samp	1.30	7.80
Dried beans and lentils	0.54	3.10
Cooking oil	0.71	3.06
Eggs	0.65	2.53
Tinned fish	0.57	2.53
Potatoes	0.59	2.44
Other vegetables	0.40	1.33
Fruits	0.21	0.94
Rice	0.84	4.06

Table 3 indicates the proportional spending for currently zero-rated items. The majority of commodity goods are overindulged in by lower-class households. Two examples are rice and maize meal. On average, the first four deciles spend 0.43% and 0.25% of their total expenditures on maize meal and rice, respectively. On the other hand, Table 4 reveals that VAT relief for all zero-items (identified in this study) has a progressive impact, nevertheless, individually some of the commodity items still takes a larger portion of income from the poor. The first four deciles accumulate 53% of the entire benefit, which is a total VAT reduction of R29 201.55. Approximately 73.76% of VAT reduction is given to the first seven deciles.

Table 3. The percentage of total consumption spending allocated to zero-rated items (by decile)

Expenditure items	Household deciles									
	1	2	3	4	5	6	7	8	9	10
Maize	0.64%	0.50%	0.38%	0.19%	0.26%	0.19%	0.22%	0.09%	0.03%	0.01%
Samp	0.10%	0.12%	0.10%	0.02%	0.05%	0.03%	0.02%	0.02%	0.01%	0.00%
Dried beans & lentils	0.04%	0.07%	0.03%	0.02%	0.04%	0.02%	0.02%	0.01%	0.01%	0.00%
Eggs	0.17%	0.12%	0.10%	0.08%	0.07%	0.05%	0.05%	0.03%	0.01%	0.01%
Cooking oil	0.20%	0.12%	0.11%	0.07%	0.08%	0.06%	0.05%	0.01%	0.01%	0.01
Tinned fish	0.15%	0.10%	0.07%	0.07%	0.07%	0.05%	0.04%	0.02%	0.01%	0.01%
Potatoes	0.17%	0.02%	0.09%	0.08%	0.07%	0.05%	0.03%	0.02%	0.01%	0.01%
Other vegetables	0.13%	0.10%	0.7%	0.07%	0.06%	0.06%	0.05%	0.04%	0.01%	0.02%
Fruits	0.02%	0.05%	0.03%	0.03%	0.04%	0.03%	0.04%	0.02%	0.01%	0.02%
Rice	0.29%	0.27%	0.17%	0.12%	0.13%	0.09%	0.07%	0.04%	0.02%	0.01%

Table 4. Monthly VAT income foregone (VAT aid) per family on commodity products currently taxed at zero-rate in Rands (2017 pricing)

Decile	Zero-rated commodity items	VAT at 14%	VAT at 15%
	Total expenditure on all items	Total VAT saving on commodity items	Total VAT saving on commodity item
Poorest	28 997	4 059.58	4 349.55
2	24 127	3 377.78	3 619.05
3	42 434	5 940.76	6 365.1
4	8 353	1 169.42	1 252.95
5	33 376	4 672.64	5 006.4
6	24 321	3 404.94	3 648.15
7	33 069	4 629.66	4 960.35
8	21 278	2 978.92	3 191.7
9	15 962	2 234.68	2 394.3
Richest	32 021	4 482.94	4 803.15
Total	263 938	36 951.32	39 590.7

Table 5 indicates commodity item that this study considers for zero-rating. According to the National-Treasury (2018), a total of 66 commodity items were considered for zero-rating based on public submissions. Nonetheless, not all the products on the proposal list could be complemented with the NIDS data, that, for instance, does not provide a list of white bread, brown bread and cake flour separately. Instead, NIDS data only recorded bread and flour as one category without specific identification of bread if whether it was brown or white, whereas brown bread is currently zero-rated. Out of 10832 households who reported food expedintures only 10% reported consumption of chicken as individual item, and 5% did not know the amount of money they spent on the item while that remaining 5% gave actual amounts in Rands. Therefore, the results are based on 5% of the respondents that provided amounts of money spent on chicken. Therefore, the

results are based on 5% of the respondents that provided amounts of money spent on chicken. Table 5 indicates that a progressive effect will result from the chicken VAT exemption, with deciles 5 to 10 benefiting only twice as much. Nevertheless, deciles 1-4 have an equity increase ratio of 1.39, which is the same as the richest deciles (9 and 10).

Table 5. Summary of selected commodity items for consideration (Rand thousand), 2017 prices

Items	**Progressivity index**	**Benefit Cost Ratio (BRC): 1**	**Equity Gain Ratio**	**Average proportional spending (decile 1-4)**
Chicken	-347.71	2.02	1.39	0.33
Criteria	Progressivity index (divide the variation in the mean income of the two categories by the difference in the average tax rates amongst the impoverished and the wealthy) is negative. VAT relief will be progressive	Gain to decile 5-10 is not more than twice the gain to decile 1-4	Average proportional expenditure of the impoverished (decile 1-4) is 5 times than that of the wealthy (decile 9-10)	Average proportional spending is greater than 0.20%

Table 6 illustrates how the reduction in chicken VAT will have a progressive effect. Poor households receive VAT relief on a bigger percentage of their income than wealthy households. For chicken, there is a total VAT relief of R 8 004.45, of which 49.7% of the benefit is attributed to the first four deciles. About 66.5% of the VAT relief would go to the first seven deciles. The scores shown in Figure 4 below are for individual quick-frozen chicken (IQF) exclusively, and as a result, they are significantly lower than for chicken overall.

Table 6. Monthly VAT paid per household on chicken in Rands

Decile	**Chicken**	**VAT at 14%**	**VAT at 15%**
	Total expenditure	**Total VAT paid in Rands**	**Total VAT paid in Rands**
Poorest	7 236	1 013.04	1 085.4
2	6 163	862.82	924.45
3	10 533	1 474.62	1 579.95
4	2 565	359. 1	384.75
5	8 815	1 234.1	1 322.25
6	7 649	1 070.86	1 147.35
7	10 402	1 456.28	1 560.3
8	7 838	1 097.32	1 175.7
9	5 439	761.46	815.85
Richest	13 511	1 891.54	2 026.65
Total	80 151	11 221.14	12 022.65

Then again, Table 7 indicates proportional spending on chicken by household deciles, average expenditure for the first four deciles and the equity gain ratio. Consumption of chicken by the poor comprises a greater portion of earnings compared to the wealthy (given that the average amount spent on chickens drops when income rises).

Table 7. Proportional spending and equity gain ratio of chicken by decile

Items	Household Decile										Average deciles 1- 4	Equity gain ratio
	1	2	3	4	5	6	7	8	9	10		
Chicken	0.48%	0.38%	0.29%	0.23%	0.23%	0.20%	0.19%	0.12%	0.05%	0.04%	0.34%	1.6

South African households can purchase chicken in a variety of forms, including whole, fresh, processed, and frozen parts. The cheapest retail pricing for chicken parts is for quick-frozen chicken pieces. They are frozen components that are marketed in plastic bags and are more frequently purchased by lower-income families. The classification is well-known and may be easily tracked by the country's industry sources and data from the CPI. However, if the concept of Individually-Quick Frozen chicken is not satisfactorily constrained and simple to monitor, sellers may be able to improperly label other chicken foodstuffs (National-Treasury, 2018). Figure 4 shows average retail prices of chicken for 2017 and 2018 (in Rands).

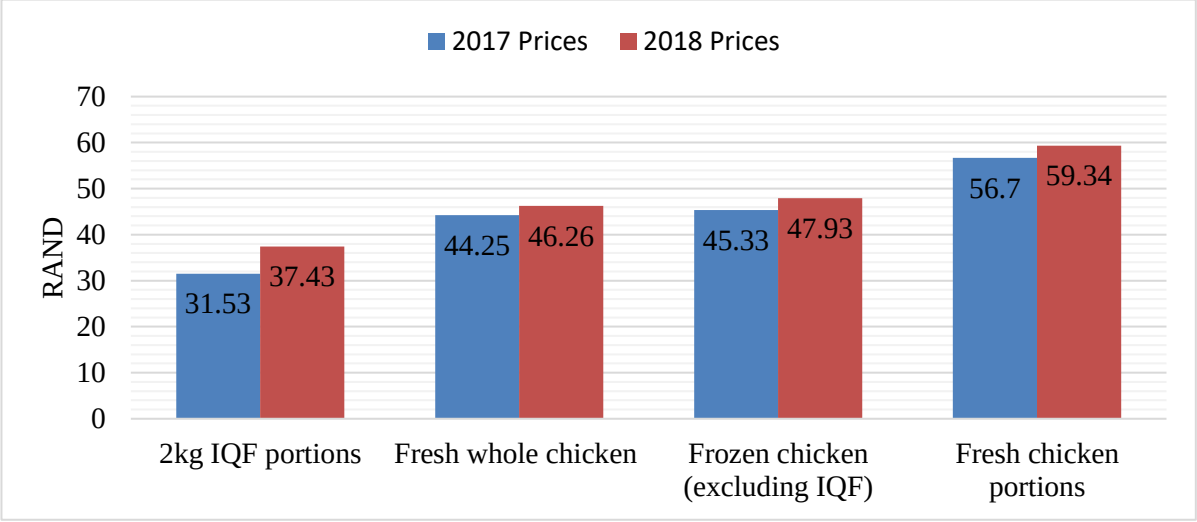

Figure 4. Retail prices for broiler meat, average 2017/18

Source: South African Poultry Association (SAPA) – Key signals in the broiler industry for the fourth quarter

According to SAPA (2018), fresh chicken made up the remaining 12% of sales in 2018, while frozen chicken accounted for 88% of them overall. When household income rises, the proportion of overall spending on chicken as a whole decrease, indicating that chicken is an essential item for almost entire South African households. Households with higher incomes are more probable to buy processed and fresh chicken products and to switch out chicken for more expensive meats. Even though there are no statistics on consumption of IQF by household income level, almost complete industry observers concur that low-income consumers consume the most of it. For low-income households, chicken continues to be the predominant protein source. In terms of nutrition and the environment, it is preferable to dairy and red meat. The cost of fish is out of reach

for low-income households. Concerns were expressed that the zero-rating of IQF chicken might significantly affect domestic output, allowing dominant enterprises to benefit from cheaper taxes and inadvertently subsidizing imports (National-Treasury, 2018).

Two major producers of chicken dominate the domestic poultry market; Rainbow Chicken and Astral Foods. As these players have a history of abusing their position, it is unclear how zero-rating would affect the value chain or help low-income buyers. One such settlement was reached in 2012 between the Competition Commission and Astral over Astral's price-fixing, trading-condition-fixing, and abuse-of-dominance practices in the Western Cape Province. There is no evidence to suggest that such market behaviour would change if IQF portions were to receive a zero rate. Additionally, since 2010, imports have contributed an increasing percentage of the consumption growth (National-Treasury, 2018). The National Agricultural Marketing Council (NAMC), the Industrial Development Corporation (IDC), and the Bureau of Food and Agriculture Policy (BFAP) conducted a collaborative study in 2016 that supports this. While making up just around 20% of domestic production, imports have grown significantly in recent years (BFAP, 2016).

According to the National-Treasury (2018), at the end of 2016, it was estimated that R17 billion had been spent on IQF chicken. Furthermore, eliminating the VAT on chicken would cost the public coffers R 2.1 billion, as opposed to R 3 billion if frozen chicken were eliminated. Yet, the price of zero-rating IQF chicken alone would be equivalent to almost 10 percent of the forecast rise in Value Added Tax collection and 0.15 percent of all projected tax receipts. The price of lost Value Added Tax revenue possibly will increase over time since wealthy people may migrate to individually quick-frozen chicken if it is zero-rated. Even though they believe it to be less convenient and of worse quality. Statistics on the consumption of chicken in fast food, either overall or just for IQF portions, are also unavailable, however the numbers are probably insignificant. Most fast-food restaurants specialize in chicken. These franchises, according to rough estimates, use around 5 percent of all chicken produced, however they frequently have specific sellers (such Astral Foods and Rainbow Chicken) and do not use IQF chicken (National-Treasury, 2018).

Regardless of how progressive government spending is, improving income distribution necessitates an overall progressive prevalence of taxation. However, spending initiatives can help to lessen the effect of the VAT hike on poor families. If one were to look at the absolute rather than the relative worth of the meat exemption to the impoverished, it would result in a greater loss of income than any other commodity (Alderman & Del Ninno, 1999). Theoretically, zero-rating chicken or poultry as a whole would be expensive, but because low-income households consume more of it, zero-rating IQF sources would have relatively little financial impact. Zero-rating IQF would result in less income loss than chicken as a whole.

Individually quick-frozen chicken portions should be zero-rated because it is the staple food for the poor households. As already mentioned above, over 50% of people in the nation are impoverished. Therefore, the unemployed and low-income households would benefit directly from zero-rating of IQF chicken portions. UNICEF (2020) has reported that around a third of all children on the Free-State and Gauteng provinces are stunted because of malnutrition. Furthermore, over half (30.3 million people) of the population is living in poverty while 13.8 million people are experiencing food hunger, and overall, about 22.8% of the country's children are stunted by malnutrition (World-Health-Organisation, 2023). This is what malnutrition does, these children will never reach their full potential. Even though there are many nutrient deficiencies that contribute to malnutrition, but chicken remains the cheapest source of protein for the poor. Chicken is a major food expense for low-income households, of which it is popular and nutritious. In addition, lower-income households purchase a higher percentage of zero-rated commodity items. Removing VAT from IQF chicken portions therefore would directly target the poor, which is the specific objective of VAT relief

Conclusion

Looking at the contextual, significance and the welfares of VAT zero-rating, it was discovered that VAT would be a regressive tax at its standard rate, with the poor households spending most of their income on consumption. VAT zero-rating was implemented as a measure of fighting the regressivity of the tax and help in achieving vertical equity. Zero-rating some commodities on their own was not only proper, but essential to a just and equitable tax structure. The majority of zero-rated goods are heavily used by low-income households. Nevertheless, there are few exceptions for fruits and some vegetables.

Regarding a possible zero-rating expansion, zero-rating chicken or poultry as a whole would be costly in theory, but since low-income families consume more of it, the financial impact of zero-rating IQF sources would be negligible. IQF would lose less money if it were zero-rated than chicken overall. Due to its popularity and nutritional value, chicken is a costly food item for low-income people. Furthermore, the proportion of zero-rated commodities items purchased by lower-income households is higher. Thus, eliminating VAT from IQF chicken portions will specifically benefit the poor, which is the purpose of VAT relief.

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